

REMARKS

The present application was filed on September 22, 1999 with claims 1-11. Claims 12-14 were added in a previous amendment. Claims 1-14 remain pending. Claims 1, 5, 10 and 12 are independent claims.

In the outstanding Office Action dated May 18, 2005, the Examiner: (i) rejected claims 1-11 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,274,823 to Brenner et al. (hereinafter "Brenner"); and (ii) rejected claims 12-14 under 35 U.S.C. §102(a) and (e) as being anticipated by U.S. Patent No. 5,933,598 to Scales et al. (hereinafter "Scales").

With regard to the rejection of claims 1-11 under 35 U.S.C. §102(b) as being anticipated by Brenner, Applicants assert that Brenner fails to anticipate claims 1-11 both in their original and amended form. Support for the amendments can be found in FIG. 2 and pages 10-13 of the specification.

The present invention, as recited in amended independent claim 1, recites a method of processing work items in a data processing system, comprising the steps of: (i) generating an interrupt in response to receipt of a work item in the system; (ii) disabling system interrupts; (iii) scheduling a task through the generated interrupt for processing of the work item; (iv) executing the task to process the work item; (v) processing additional work items received by the system; and (vi) when there are no additional work items for processing, speculatively scheduling a further task for processing of subsequently received work items in the system, without enabling system interrupts. Amended independent claims 5 and 10 recite other aspects of the invention comprising similar limitations.

Brenner discloses a method for serializing requests for exclusive control of a resource that is shared by a plurality of computer processors. When an interrupt requests a resource that is not available, the request is added to an interrupt queue. When the task currently using the resource has finished using the resource, requests in the interrupt queue are processed. The resource lock is released when all interrupt requests from the interrupt queue have been processed.

While Brenner discloses that requests for interrupts are stored in a queue, and that interrupts are "disabled" in certain steps of a process, the system interrupts are still enabled in that they continually generate requests, which are only stored in a queue when requesting a resource that is

not available. Brenner specifically states that one the specific objects of the invention is not to disable interrupts, see, Abstract, Col. 2, lines 8-12 and 34-37 . Thus, Brenner fails to disclose the step of disabling system interrupts after generating an interrupt in response to receipt of a work item in the system.

After interrupt requests in the queue are processed, Brenner releases the resource lock allowing interrupt access to the resource. Thus, Brenner also fails to disclose the step of speculatively scheduling a further task for processing of subsequently received work items when there are not additional work items for processing, without enabling system interrupts.

Dependent claims 2-4, 6-9 and 11 are patentable at least by virtue of their dependency from independent claims 1, 5 and 10, and also recite patentable subject matter in their own right. Accordingly, withdrawal of the rejection to claims 1-11 under 35 U.S.C. §102(b) is therefore respectfully requested.

With regard to the rejection of claims 12-14 under 35 U.S.C. §102(a) and (e) as being anticipated by Scales, Applicants assert that Scales fails to anticipate the limitations of claims 12-14.

Claim 12 of the present invention recites a method of processing work items where an interrupt-based mechanism for processing work items is provided when system utilization is low with respect to work items, and a polling-based mechanism for processing work items is provided when system utilization is relatively high with respect to work items.

Scales discloses methods for enabling data sharing among workstations of a distributed shared memory system using variable sized quantities of data. In particular, the portion of Scales cited by the Examiner discloses a polling mechanism used to process messages generated by the workstations, and the advantages of such a mechanism over an interrupt mechanism.

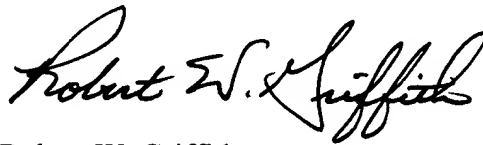
Independent claim 12 of the present invention differs from Scales in that it discloses the use of an interrupt based-mechanism and a polling-based mechanism. While Scales discloses an polling mechanism, and the possible use of an interrupt mechanism instead of the polling mechanism, it does not disclose using both a polling mechanism and an interrupt mechanism. Further, Scales does not disclose mechanisms that are dependent on utilization with respect to work items as recited in claim 12 of the present invention.

Dependent claims 13 and 14 are patentable at least by virtue of their dependency from

independent claim 12, and also recite patentable subject matter in their own right. Accordingly, withdrawal of the rejection to claims 12-14 under 35 U.S.C. §102(a) and (e) is therefore respectfully requested.

In view of the above, Applicants believe that claims 1-14 are in condition for allowance, and respectfully request withdrawal of the §102(a), §102(b) and §102(e) rejections.

Respectfully submitted,

A handwritten signature in black ink, reading "Robert W. Griffith". The signature is fluid and cursive, with the first name "Robert" and last name "Griffith" clearly legible.

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